ABSTRACT

A method and apparatus are provided for reducing current demand variations in large fanout trees. The fanout tree is split into at least 2 sub-groups, each preferably with substantially equal parasitic capacitance. Data is then scrambled according to a scrambling sequence function to provide scrambled data having a constant number of bits that are toggled with respect to time, such as when observed in pairs of sub-groups. Functionally, an apparatus according to an embodiment of the present invention includes 3 blocks: a scrambler, egress logic, and a de-scrambler. The egress logic is simply a block of storage that can reorder the bytes received from the scrambler. The de-scrambler de-scrambles the retransmitted data based on the scrambling sequence function. Embodiments of the present invention can be applied to any system where data must fanout from a single source to many destinations, such as switches.